

T.V.

Superheroes of Television Science Fiction

PRICE 35p No 64

# SCI-FI

MONTHLY

**STAR TREK:  
THE KIRK  
STORY**

**BACK STAGE  
WITH DR. WHO!**



**ENTERPRISE  
BRIDGE  
BLUE-PRINT**

**PLUS: THE  
BLACK HOLES  
OF SPACE: 199**



**GIANT STEVE AUSTIN  
PIN-UP INSIDE!**



Is Mankind Alone In The Universe? Or, Like The  
Worlds Of STAR TREK And SPACE: 1999, Is There...

# LIFE IN SPACE?

Romulans, Klingons, Vulcans and Psychons... there seems to be no end to the intelligent life-forms constantly being discovered in the worlds of Star Trek and Space: 1999! Indeed, perhaps the population explosion is not just Earth's problem, but a problem afflicting the entire *Cosmos!* But is reality as this the case? ARNOLD KINGSTON investigates

Calculations suggest that for every three million stars, there is one civilization like our own — or in advance of our own — scattered throughout the Galaxy! Now many scientists agree that life in space is not only possible, but a certainty. However, such ideas are only relatively new. Even up to the first half of this century, the concept of alien races was scoffed at as mere speculation. Indeed, for a long time it was believed that even planetary systems (such as our Solar System) did not exist anywhere else in the Universe.

However, the last few years have come to light postulating that our Solar System, rather than being a Universal exception, is, in fact, a Universal rule!

In 1963, Dutch American astronomer Peter Van de Kamp discovered a "wobble" in one of the stars of the double-star system 61 Cygni. This wobble suggested that a companion too small to be seen off light-years away, in other words, a planetary system! In 1962 another planet was discovered, thus breaching the star Lalande 21185. Since then there has been a rash of "wobble" sightings, the most exciting suggesting the presence of a three-planet system around Barnard's star (which is, in fact, very close to our sun — only 5.9 light



years away).

So it now appears that throughout the Universe there are Solar Systems and their own, complete with Stars and orbiting planets — the perfect situation for life to evolve! However, as for Star Trek's Spock and Space 1999's Maya to evolve, other factors must occur within these planetary systems. First of all, the star itself would have to be of a certain size. The larger the star is, then

the shorter-lived its planet will be. This will mean that it will die out before the planet has had time to go through the long chemical stages to the evolution of complex life forms. On the other hand, a star that is too small will not be able to heat the planet sufficiently, unless the planet is extremely close, in which case it will suffer damaging tidal effects.

One estimate gives the figure of 17 billion

stars of the right size, in our Galaxy, capable of having habitable planets orbiting them! The planets themselves would have to be large enough to keep an atmosphere (if it were too small the gravity would not be strong enough to keep the atmosphere from fleeing away into space — similar to what happens on the Moon).

On the Earth, the chemical basis for all life is an amazing substance called DNA (short for Deoxyribonucleic Acid) which, though very complex in construction, is made up of just five kinds of atoms: carbon, hydrogen, nitrogen, oxygen and phosphorus. These atoms were abundant in the oceans and atmosphere of the primitive Iridium Earth. Similarly they must have been abundant in the beginning on the home planets of Spock (Planet Vulcan) and Maya (Planet Pachyon). Although Spock has a slightly different internal structure to that of Captain Kirk and other Earthlings, he is still a product of the form of life known as carbon-based.

Most biologists now believe that this form of life is considerably common on planets throughout the Universe, but the does not mean that a creature resembling man exists on any one of them. The almost infinite variety of living forms in our own World is a sufficient proof that nature never repeats itself exactly. There must be thousands of Worlds ruled by two-eyed, four-legged creatures, but other sans and nine-armed apes will produce many changes in detail.

The idea that other varieties of life share our solar system is a possibility, which are utterly different to our own carbon-based life form is not new. More than fifty years ago a paper read at the Royal Institution in London speculated freely on the



**"There is every chance that other civilizations exist in the Universe..."**

possible existence of a high temperature protoplanet.

More recently, the biochemist and science fiction writer Isaac Asimov suggested some different categories of living creatures based upon different characteristics of life temperatures. Not enough to re-kick the field of interstellar civilization history might evolve. At somewhat cooler temperatures (around 150-400°C) life might be based on fluorocarbon compounds with liquid sulphur taking the place of water. These would also be at least three other possible life elements, perhaps existing far below the average on Earth. In the warmer regions of these, liquid ammonia would replace water. Life forms in such an environment would flourish at around 50° below zero. Still further down the thermometer scale at 120° below zero liquid ammonia might take over, and finally at 220° below zero liquid hydrogen might be the element we need on Earth. These alternative life forms could point out the possibilities of other life forms existing much nearer to us than on 61 Cygni C. Perhaps even as close as Jupiter, Venus or Mars!

On these planets it is evident that different life forms would develop in different ways. Similar life chemistry in their own, the inhabitants would be different, adapting to their environment for survival. Take Spock's home planet of Vulcan, with its thin air, the high gravity and the extreme heat and cold. As we read in issue 1 of TV SCI-FI MONTHLY, the Vulcan people can of the people of Vulcan are remarkable in that they have made almost inaudible by the thin atmosphere of Vulcan, giving them a defense mechanism against the huge reptilian creatures which roamed the planet in the age of Spock's primitive ancestors.

Apart from the Vulcan's pointed ears, their twin pointed ears, their thin blood (caused by the thin atmosphere and the thin air which is found in it), the Vulcans are very similar to man. But what can we expect to find in the way of differences in the shape of other intelligent life in the Universe if we receive an answer to the Andromeda message we transmitted to the Universe at November 1940?

Man on Earth has developed eight unique and authentic characteristics from ancestral man who stood on his legs in order to be free to use his hands. With the increased use of his hands, his brain simultaneously grew larger in proportion to his body. His hands became capable of making more delicate movements than those of animals with claws or hooves. Certainly, animals without the ability to control complex movements with fingers or arms are handicapped compared to man.

The eyes and ears, brain, and sensory organs, have always been sited close to the brain so as to shorten the path of nerve stimulation. From this we can extrapolate that other intelligent creatures would have an exact position with eyes and ears in the head for good reason. The eyes of man were duly lit by a small red eye for example, the eyes might be large for greater light gathering power, somewhat similar to nocturnal animals on Earth. They may even be able to "see" a lower level of radiation than we can.

Stomatocopic vision is also a prime requisite in order to take in the full 3-dimensional aspect of the environment around them. Without this they would forever be incorrectly gauging the distance of objects around them.

The chances of four-legged humans, or at least extremely powerful leg-muscled humans, exist if the gravity is excessive. This is not the case with Spock's home planet Vulcan the gravity is surprisingly very slight, yet his body has not grown accordingly with the environment. It would be expected that he would be shorter and squatter with a very powerful body to accommodate his "greater weight". Also, with the thin atmosphere he hands should be much larger in order to take in the necessary amounts of air required to keep him alive.

So it would appear that there is every chance that other civilizations exist in the Universe, and it may well be that they will look very similar to ourselves. But if they don't then we ourselves may have to develop a lot further, especially when we consider how different we are to our own brothers with different colours and different racial characteristics here on Earth!

3 THE WANDERER: TV Sci-Fi's resident alien answering your letters

4 ENTERPRISE BRIDGE BLUEPRINT: Another special plan pull-out, this month detailing the control deck of the Galaxy's most famous starship

5 READOUT: A brief roundup of news and facts from around the globe

6 THE JAMES T. KIRK STORY: The fourth in our series of Star Trek profiles. This time it is your Captain speaking

8 STEVE AUSTIN PIN-UP: The Six Million Dollar Man in all his glory, as seen by artist Jeff Cummins

11 END OF THE UNIVERSE: Our Science Fact Special investigates Black Holes, the dark jems which some scientists feel could destroy space... and us!

13 JIMI GEMINI: TV Sci-Fi's other alien looks for the future in the events of today

14 INSIDE DOCTOR WHO: A visit to the sets of the world's longest-running TV sci-fi series

Back Cover: ALIEN OF THE MONTH — This month's creature feature is the disgusting Zygon, from the Dr. Who episode 'Terror of the Zygons'

## THE WANDERER

39 Goodge Street  
London W1P 1FD  
U.K.  
Planet Earth

Greetings Earthlings!

You are holding a vital piece of interstellar documentation — the fourth issue of the Earth magazine TV SCI-FI MONTHLY. If you are an old fellow traveller, you will know what is in store. If this is your first taste of TV S-F, this is your future!

Data from the Enterprise this month includes a full-scale profile of Capt. James T. Kirk, plus a special blue-print pull-out of the Starship's famous bridge. With my old colleague Dr. Who we examine the weird world of special effects. Space 1999's Cmdr. Koenig guides us through a Black Hole, and as a special bonus there is a pin-up of that super-Earthling Steve Austin.

Not bad, eh?

Thanks many times over to all you Trekkies, Moonbasers, Dr. Who and Six Million Dollar Fans for the stacks of mail you have been directing to my Earth base. My only regret is that I can't print more! The amount of information you have stored away on such shows as Star Trek is, well, astronomical!

\*Tis all for now, so until next issue...

THE  
Wanderer ...

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Dear Wanderer,  
You make a lot of what the science fiction buffs call mistakes in your article on "Amok Time" you made for us.

1. Vulcans go into pon farr every seven earth years, not every 15 as you stated. 2. Piromni soup is not piromni soup but PIGMEK soup. 3&4. The alien used is the Loppe, not the Loppe. And the leader strip is the Ahoy, not the Ahoy. 4. The main pin-up of Mr. Spock was better suited to TPing. It's not the suave matin arch, a member of the high council and about 200 years old. Asper from their mistakes, I am really glad that you do such splendid articles on STAR TREK. I think your magazine is the tops. How about a section of Mr. Uhura or Spock talking about a kooky chick Christine Chapel? Do you think you could tell me where I might obtain the Ballantine books or join any fan clubs even remotely connected with STAR TREK in England?

Thank you again and again,  
Yours sincerely,  
Kathrina Fleischer

Uh, yeah. Kathrina, we really did it didn't we. All we can say to you and the hundred or so others who wrote in pointing out the goof in "When Vulcan Ran Amok" is — sorry! The writer and researcher responsible has been banished to the most god-awfully nasty planet Lt. Uhura and Christine Chapel! Hmmm. We are currently compiling a list of STAR TREK fan clubs. Watch out for future issues. The Ballantine books can be obtained from "Dark They Were and Golden-Eyed," Berwick Street, London W1.

Dear Wanderer,  
So far I have both copies of TV SCI-FI MONTHLY, and I am thrilled that there is now a magazine based on TV's science fiction. My only complaint is, STAR TREK is all we seem to see and read about so far. Not that I don't like STAR TREK, but your magazine is full of stories about the Starship Enterprise. I would like to see more, like the Star Trek comic book, and I would like to see more of me, too. There seems to be no one page of that DR WHO is the most brilliant TV programme ever, it is sci-fi and yet it has hardly had

any mention! Now come on! DR WHO has been running for longer than any sci-fi programme I know, and it's 120,000,000 years per week. SO LET'S HAVE A LITTLE MORE DR. WHO AND A LITTLE LESS STAR TREK!

Yours,  
Marcus Jason,  
Hertford.

Okay Marcus, take a look at page 15, but watch it — the Trekkies will get you.

Dear Wanderer,  
I liked your first issue of TV SCI-FI MONTHLY and have now gladly got issue 2. I like your magazine because it has given me something completely new to collect, as I am mad on SPACE 1999, though my most exciting series was the original STAR TREK. I would like to see a lot of UFO in the magazine, and also competitions. Please, please could you do so.

Yours sincerely,  
Steve Platt

Like LOST IN SPACE, we are examining the possibility of doing a UFO feature in the near future.

Greetings to you, Wanderer!  
I, too, have travelled in time (present, past and future) to the edge of the solar system and beyond, but I can see now that I will never return to the 20th century. I am currently writing a book on our galactic magazine. I very rarely have a chance to disrupt new chemical formulas with Mr. Spock or to play chess with Captain Kirk, nor have I chatted to Commander Koenig for a while, so I hope your magazine will keep me informed of their progress. My favourites of the interplanetary travellers are the crew of the Starship Enterprise (especially Mr. Spock), but a fellow traveller (who, incidentally, is my best friend) goes head over heels about Mr. Chekov, so a word here or there about him wouldn't be left unanswered. I have many friends and delights, but first two editors of TV SCI-FI MONTHLY and look forward to many more. May you live long and prosper.

Wanderer of the Stars

Always pleased to meet a fellow galactic traveller. Don't take any wooden xylophones!

Dear Wanderer,  
I have been looking through Sci-Fi magazines and I think it's very good! After reading this first issue completely, I decided that I would write you a letter and tell you some future additions. The story "The Star Trek" in "Star Trek: Could It Kill" was quite good (keep up the good work!). I think you should write up a story on an episode each month. Perhaps you could even have pictures about the episode every issue. I also have a suggestion on a star mate, Kari, played by Janice Lerner from the episode "The Squire of Gothos". You could even invent a section called "UFO in Space". Though some have different opinions on the show, I still think it would be a good idea.

You're probably wondering how I, a person living in New York City, got an issue. Well, actually it was my mother who gave me a copy, and I will be getting more issues. You've got a good magazine — keep up the great work!

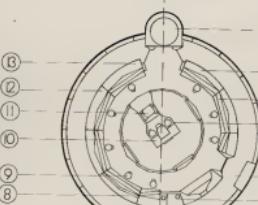
Sincerely,  
Lie Sosel,  
New York City, N.Y.

Thanks for all the compliments. We've dropped Estimate of the Month for the moment, but if you want it back — who knows? We've been investigating digging up some material on the TV show LOST IN SPACE. Watch for developments.

That's it for this month. If you have a letter to send to me, please address it to: The Wanderer, TV Sci-Fi Monthly, 39 Goodge Street, London W1P 1FD, U.K.

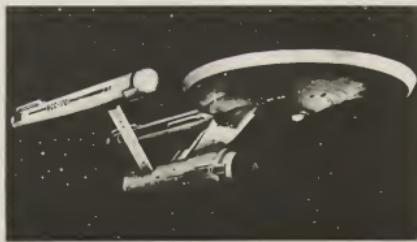
Also, if you're in need of a pen pal, why not send in your name and address and I'll try my best to look you up.

# USS ENTERPRISE STARSHIP BRIDGE BLUEPRINT



## KEY TO ENTERPRISE BRIDGE

- 1 TOILET
- 2 SERVICE CORRIDOR
- 3 OUTER SHELL STRUCTURE
- 4 COMMAND MODULE
- 5 ENGINEERING STATION
- 6 TURBO ELEVATOR
- 7 DEFENCE & WEAPONS STATION
- 8 HELM & NAVIGATION
- 9 COMMAND CHAIR
- 10 COMMAND INTELLIGENCE STATION
- 11 ENGINEERING STATION
- 12 SUPPORT PYLON
- 13 CONTROLS CONSOLE
- 14 ASTROGATOR
- 15 COMPUTER
- 16 HELM
- 17 HELM
- 18 HELM
- 19 SENSORS ALERT LIGHT
- 20 VISUAL INTELLIGENCE SCREENS
- 21 COMPUTER DATA READOUT SCREENS
- 22 BRIDGE VENTILATION



READOUT...READOUT...READOUT...READOUT...READOUT...READOUT...READOUT...READOUT...READOUT



## SONS OF STAR TREK

GENE RODDENBERRY, creator of *Star Trek*, and the indispensible father of television science fiction, is back in the *Trek* belt again during the first full-length feature movie of the series in Hollywood (see TV S-F No. 20). The Gene Roddenberry interview, here, Gene again talks to TV S-F FI, this time telling of some of his show which didn't fit to the screen...

TV S-F: Gene, besides the *Star Trek* film, you are still stocking with television?

GR: Yes. If we abandon TV, then the hacks will run it even further into the ground. I have other projects. One of them is *MAGNA 1*, a sort of futuristic underwater series in the year 2110.

What about the other projects?

One of them is dead already. It was originally called *Deceas II* and I had great hopes for it. It dealt with the exploits of a 20th century

mornings wondering what I could put over on the network bastards that day. It was part of keeping sane under the pressure of the tape, the pressure of the schedule?

It was run as a move for TV and the network didn't like it, so I took it to another network — they wanted another pilot. So we shot another two-hour movie based on one of the episode plots and retitled the show *Power of Earth*. It was inferior to the original, but it was what we were looking for at the time. Then they paddled around for a year and decided to make it their way — another two-hour movie called, this time, *Strange New World*. It was horrible. I had nothing to do with it. The contract gave them the right to use the property on their own. It's so bad that I'm sure it's dead. It's a shame, but it shows what happens when the network gets its hands on what it thinks science fiction is. They ruin everything. That's why I refuse them. *Quaser*, my other show?

What was that about?

*Quaser*, the hero is a machine ... an android ... an ambulatory computer, in fact. His thinking is much like that of Mr. Spock, I wrote that part for Leonard Nimoy, but he had an argument with the studio and had to use another actor. He wasn't to be distinguishable from people like Spock was with the ears, either. We decided that it worked better with out that this time. As I see it, anyone who approaches the human race as a machine of intelligence or logic will stick out like a sore thumb, so why bother with ears? What is the plot of *Quaser*?

He's a sort of mechanical savant, a link in a long line of such creations made by a race from another planet



## FROM THE VAULTS

This month's trip into the vaults takes us back to 1969 and one of sci-fi's wacky multi-million dollar extravaganzas — *Barbarella*. Barbarella was one of her most memorable and most memorable — and most bizarre — type heroines who takes on a whole Galaxy of lustful alien slaves. Based on the French comic strip of the same name, *Barbarella* had Ms. Fonda falling from one lecherous male to another in what was almost certainly the first *X*-rated

space epic produced. Composed by Mr. Fonda's then-husband Roger Vadim, *Barbarella* boasted the most lavish sets and outrageously inventive costumes and makeup ever seen on the screen. The most memorable were the handsome and winged — complete with enormous feathered wings — and the 'Organ of Pleasure' into which Ms. Fonda falls from one lecherous male to another in what was almost certainly the first *X*-rated

circus. Since today, *Barbarella's* nuttiness has lost its edge somewhat. However, the special effects still remain as a stunning testament to ingenuity and the permissiveness of the 1960s. Ms. Fonda's "stumb blonde" character — as enjoyable as ever! If the spate of soft-porn pictures currently being produced in Hollywood throw up just one movie as original as *Barbarella*, we will be extremely fortunate.



astronaut put in suspended animation until the year 2133AD. He awakes to find civilization as he knew it wiped out and a whole new Earth in its place. The planet is now inhabited by many different cultures, each founded on some topical segment of our present society, when it comes to such as women's lib, drugs, racism, militancy, etc. With a format like this we can go anywhere.

How does the astronaut fit in? He joins a group known as PAX, a peace-loving colony founded by ascended deities. The problem is, way of life he knew, these people live in the city of Tymara — a hedonistic, Romani-esque society run by mutants with two neaves.

Why *TMD* mutants? It's a private joint of mine. Back in the early days of *Star Trek* I was forbidden to show novels in some of the girls' dormitories. We had to re-shoot an entire segment of the show once because of it, very expensive and very stupid. So ... when this new show popped up I thought I would get away with it. The reason I couldn't show back in the old days and have *TMD* I used to wake up in the

millions ago to guide the human race into a constructive way of life and protect it from itself. We had problems with *Quaser*, too.

Like what?

The network people wanted to make alterations to the basic concept of the android and I said, "No."

What have you done with the intelligence of the show? I withdrew it rather than have it prostituted into another *Strange New World*.

What happens to it now?

I'll wait until the time is right and try again.

Any closing side?

I'm trying to write a thing called *Spectre* — ghost stories, but ghost stories handled as science fiction. You must keep busy. How does your wife keep up with you?

It's not hard. Most works outside, like the *Star Trek* series and *Quaser* and *Deceas II* and *Power of Earth*. We have a son, Gene Jr., who takes most of his time now. No ... before you ask ... Gene Jr. does NOT have pointed ears!

NEXT MONTH: Gene Roddenberry talks about *Star Trek*, both past and future.



## VULCAN ROCK

At the end of the *Star Trek* episode "The Naked Time" is which an alien water catalyst had produced bodies of temporary insanity among members of the crew of the Enterprise. First Officer Spock had been playing his Vulcan Lyr and singing a song ... James Blinn translated the words thus ...

"Ahh, we crassh, sprau pu  
Oran hah mahr assoo  
Riti hah, sa salke prite  
Froh om."

To be sung vigorously with the voice rising to (at all things unusual)

## TV S-C-F's Exclusive Special Offer



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# THE JAMES T. KIRK STORY

## The Life and Times of a Starship Commander



*He has one of the most revered jobs in the Galaxy ... and one of the most demanding. His job — commanding the USS Enterprise, this man — Captain James T. Kirk. Captain Kirk ... This is Your Life.*

Commanding a starship is no easy matter. It involves a degree of dedication that must transcend family ties and the security of a home. It requires the ability to say that a Star Fleet Commander is wedded to his ship in a way that excludes all the mundane relationships that provide comfort, support and satisfaction for more average people.

In the case of James T. Kirk, Commander of the Starship Enterprise, this dedication to duty is something close to a neurosis. He is a sensitive, idealistic man totally committed to the Star Fleet, and driven to his success as Captain of the Enterprise.

The standards of performance that he sets himself allow very little room for either relaxing or unbecoming. For anyone in a position of command, it is essential to maintain an image that inspires trust, confidence and obedience in those under him. James Kirk has been particularly aware of this need, and has exact maintenance of the morale of those put under him, for a great deal of the time is in the situation of having to seem almost superhuman.

There have been times when Kirk has given the impression that he would like to be a great deal more casual with his colleagues and subordinates, but the image of the boyish, but his rank makes this impossible.

Although he may suffer from the foibles of overexertion, James T. Kirk has become something of a legend throughout the Federation Star Fleet, particularly since he took over the Enterprise, for his skill, courage and ability to make snap, but invariably correct, decisions.

In the period of the Star Trek TV series, Kirk appears to be in his mid-thirties. He was born on Earth, in a small town in the state of Iowa. Very little has been revealed about the parents of James Kirk, but it would appear that his family did, in fact, travel across the galaxy.

Although the details of this journey have never been fully set out, Star Trek episode 10 certifies that at about the age of fourteen Kirk was present on Tarsus IV during the rebellion against Kodan the Executioner and his terrible sadistic experiments. For the sake of these experiments he had slaughtered thousands of the planet's inhabitants.

All this comes out in the episode called "The Conscience of the King." Kirk is called upon to help the rebels. On the planet he observes an actor called Kandian who was suspected of being, and later turned out to be, Kodan, the escaped mass murderer.

At seventeen, Kirk entered the Star Fleet



Academy at a midshipman. At the competition, Kirk was the best in the top five per cent of his class. He joined the Starfleet Academy as an Ensign. He moved to the U.S.S. *Farragut* and was promoted to the rank of Lieutenant. He was twenty-two at this time, and was in charge of the ship's phaser banks when a marauding, gaseous life form descended the core of the starship by feeding on their red blood corporals.

In episode "Olister," Kirk observes how the *Enterprise*, with Kirk as command, finally tracked down the same life form some twelve years later.

Kirk's first command was on a destroyer

class starship, and then there he went to the *Enterprise*, replacing Commander Christopher Pike, who had been killed and badly injured. Pike was eventually resurrected in *Star Trek IV* to live a life of trial fiction.

Replacing Pike must have been an easy task for James Kirk. Some of the crew, including First Officer Spock had served under Pike for up to eight years. It must have taken Kirk a good deal of determination to overcome their reserve and their individual loyalty.

Those times when it might seem that the life of a starship commander is a lonely and even monastic one. Despite Kirk's

single-minded devotion to his ship, there have in fact, been a number of women in his life.

One of Kirk's first recorded loves was Ruth, the girl he left behind on Earth when he entered the Star Fleet in the Star Fleet. Unwilling to wait for ever, she became bored with waiting for Kirk to return and married someone else.

Not very much has emerged about Ruth in Star Trek episodes, but from the way Kirk has made emotional references to her when delirious, or when the bulk of his sanity has been undermined, we know that he has not forgotten her.

Dr Janice Lester is another of Kirk's old flames. She and Kirk had been roommates, if not lovers, when both of them were students at the Star Fleet Academy. Janice Lester was, however, dedicated to science, while Kirk wanted to go into space. Neither would give up on her chosen career to be with the other, and this again is the story of separation and reparation.

In the case of Janice Lester she must have had the heartbreak bites. When she makes her reappearance in the episode "Turnabout Intruder," she gets her revenge on Kirk by taking over his body and transforming him into her body. Needless to say, her own plans are foiled in the end.

Dr. Carol Marcus, Commander Arnef Shaw were once close, but drifted apart because of what are described as philosophical differences. She turns up in "Court Martial" as the prosecuting officer in the trial of Officer James Finney.

Finney, incidentally, was an old comrade of Kirk's, but after his negligence in leaving a vent open to the atmosphere, he was operationally endangering the Republic while he and Kirk were serving on it. Kirk reported him to the Commander. After that, Finney became Kirk's bitter enemy. He envied Kirk's success and felt that his own career and choices of career had been blighted by his ownselfish shenanigans.

All this led up to the story "Court Martial."

Although James Kirk may not have had a great deal of success in his personal relationships, his professional career is a totally different story. Apart from his distinguished service record, his list of decorations is impressive. He holds the Palms Leaf of Axanar, the Galactic Order of Tactics (Class of Excellence), Federal Ribbon of Commanders, the Star Fleet Citation of Gallantry and the Karagon Order for Heroism.

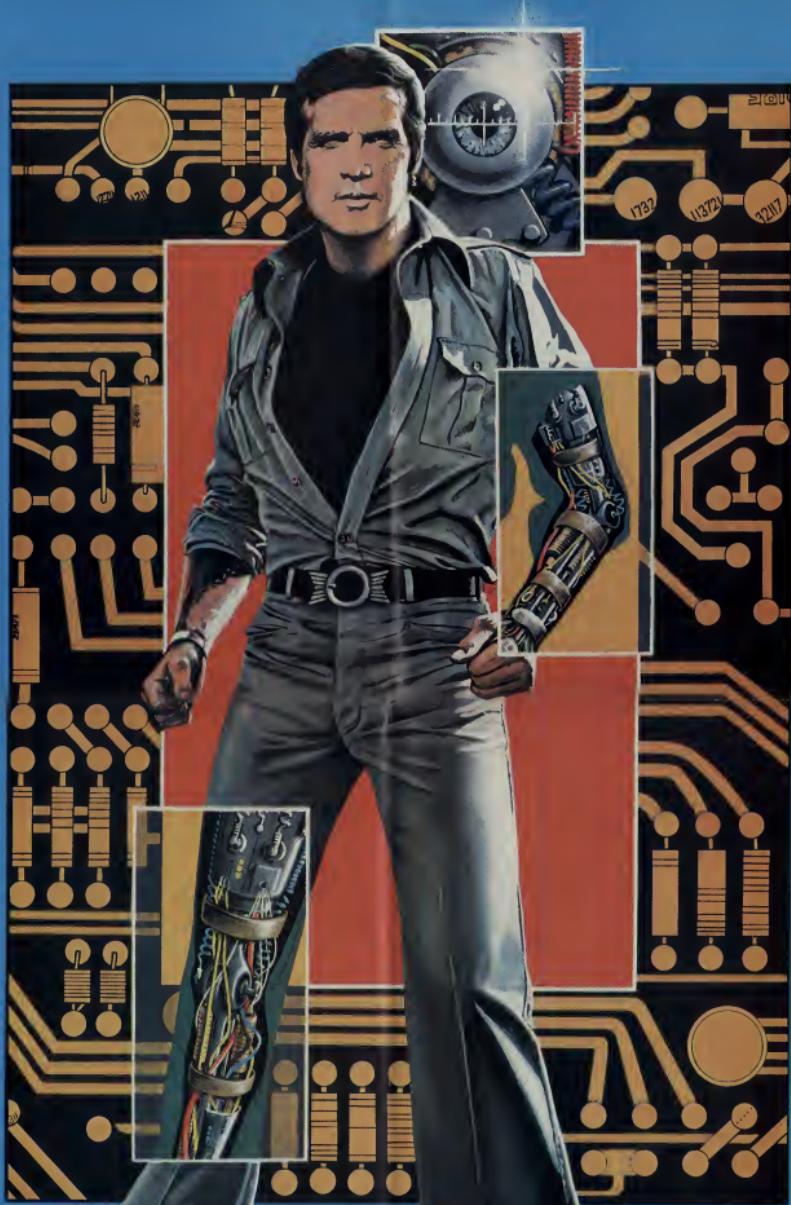
According to Star Fleet official records James T. Kirk (serial number SC 937-10176) CEO holds the rank of Captain and his official post is Commander — Starship. As Captain of the Starship Enterprise he has proved himself to be an outstanding resourceful officer. Although he has total devotion to his ship and crew may have tested some of the emotional side of his life and protected him from becoming close-minded, there is no reason why he shouldn't continue to be an outstanding officer in the Federation Star Fleet for many years to come.





SCI-FI

TV SCI-FI MONTHLY 7



JEFF CHAMBERS



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Black Holes—Collapsed Stars Absorbing All Galactic Matter. Will They Provide Mankind With The Key To Superspace? Or Do They Spell...

# THE END OF THE UNIVERSE?

Does our future rest upon those dark and little-known patches of space we call Black Holes? TV SCI-FI's Chris Rowley devotes a *Science Fact Special* to investigating this possible key to the fate of mankind... and the Universe!

Space 1999 fans will remember the words of the Tritonite Robot that renamed Moctesuma Alpha shortly after the Moon had been blasted out of its earth orbit.

"Why do you say that?"

"THE PATH YOU ARE  
WILL LEAD YOU TO CEM

"WILL LEAD YOU TO CERTAIN DESTRUCTION."

The naked brain poised, the single eye

stared, unblinking, emotionless, "A DARK AREA. YOU CANNOT AVOID IT. A BLACK SUN WHICH WILL DESTROY YOU. NOW."

"When?" Koenig leaned forward, glinting at the single eye...

broken into a dark star or as we now call them - a Black Hole.

Recently Astronomers and Mathematicians have discovered quite a lot about these frightening and enigmatic Black Holes. Their results pose some terrifying and tantalising possibilities.

On the one hand, it now seems likely that most large stars end their lives in a collapsed form, producing large numbers of Black

holes throughout the universe. In these dark stars the process of crushing gravitational attraction is, it seems, annihilating the matter of the Universe. On the other hand, there is the possibility that by learning to harness their strange powers Mankind may unlock the mysterious realm of superspace and be able to make split-second leaps across the Galaxy. In

either Black Holes could provide us with Interstellar Space Travel and even a form of Time Travel tool.

To understand roughly how Black Holes are formed, we have to remember how stars are created in the first place because it is from stars that Black Holes appear. Stars condense from the clouds of dust and gas in the universe.

all of the billions of atoms in a gas cloud will a certain amount of gravitational attraction upon their neighbours. In time this gravity pulls them together, tighter and tighter until they're packed so tightly that baby stars are formed.

balanced by the energy and gas radiating away from the central regions where hydrogen fusion is taking place.

At the other end of the scale are the *baobabs* and white giants and *alangiums* which resemble mighty, bare trees with an awesome

**"You will not survive for long... You cannot avoid it..."**

Our own star, the sun, is a happy medium on this scale with an expected life cycle of around 100,000 million years.

the strange Black Hole appears. What happens is, that as the massive star uses up a significant proportion of its hydrogen fuel, it begins to shrink. Stellar shrinkage is a useful process, as it increases the density of the star, squishing up atoms and electrons. If this were to happen to Earth, it would be a very bad day, as the planet would be crushed into a white dwarf. For large stars, this

and with others. For this time, as far as we are old, it is impossible. A few particularly enterprising and venturesome wills may be Supreme, according to us with the most stupendous of all the rights in the Universe! Suddenly the star disappears and then instantaneously converts nearly all of its remaining mass into energy! Supernovae are often brighter than the rest of the galaxy around them – as bright as the sun for days – before they splutter and go out forever. But this dramatic finish is rare and for most comets and for large massive stars

to end as a Black Hole.

As the star uses up its fuel so it reaches a point where the energy generated in its centre is no longer able to keep the crushing force of gravity at bay. Suddenly, with enormous speed, gravity was the ascendant struggle and the vast mass of the outer part of the star falls into its centre at headlong speed.

In Space 1999 the crew of *Moebius Alpha* were busy enough to have Victor Meldrew around. He came up with an energy shield that protected the base as it fell into the Black Hole and was captioned "the last survivor of another universe." It's this possibility that has added interstellar bounces to the excursions.

... You cannot avoid it ...



## TOMORROW IS ALREADY HERE!

So, Earthlings, it is time once again to look into the probable lines of your future. Seated at the control console of my chronosphere, I experience a certain awe at the blind indifference with which terrestrial creatures rush upon their destiny. Consider a handful of this month's items: The extraordinary implications of electrical stimulation of the brain. Compulsory sterilization in India. First steps towards voluntary euthanasia. Perhaps these appear to you as isolated events, of no particular significance. On the contrary, they are the subtle, subterranean seeds which will one day grow into the shape of things to come. As a galactic information detective, this is my job, to see the invisible patterns of the future in the chaos of the present. And I tell you, the present is already past, tomorrow is already here!

● **ANIMAL ROBOTS BY YEAR 2000** WILL BE USED IN WARFARE, CRIME AND HOUSEWORK. Electrodes in the brains of animals could turn them into virtual robots, says Dr. Ron Levenson, New York professor of psychology. "It does not lie in the realm of science fiction," By the year 2000, he predicts, "man will use the animal as an instrument of warfare and vehicle for espionage. Imagine a group of rats sent to do bombing, assassinations. Criminal activities such as theft, robbery and even murder will be committed by specially trained pets in the employ of racketeers." Electronically controlled household pets will also become household slaves. Simply by turning a dial, the owner will be able to make her animal robot "open doors, close windows, adjust seats and even call out for help."

Electrodes in the brain give pain-control. "We can already implant minute electrodes into areas of the brain where pain is placed, and use to stop them attacking." Dr. Levenson explains "It is only a matter of time before electrodes can be implanted into every part of the brain to make them do whatever we wish."

Dr. Levenson's claims are supported by news that scientists at Cardiff University have developed a new kind of implant that combines multi-barrel electrodes (each with up to 64 "points") that monitor or control separate brain functions with a tiny printed circuit of the kind used in computers. The implants are tiny and reliable. It allows scientists to monitor a broad range of brain activity while the subjects (in this case bees) are free to move around normally.

Electrical stimulation of the brain (ESB) has become one of the most important frontier in brain research over the last 10 years. Experiments on insects, animals and humans have allowed scientists to pinpoint the precise parts of the brain that control not only physical

movements, but also emotions, memories and feelings. By simply pressing a button, the scientist can make a person move any part of his body automatically, evoke feelings of fear, sexual pleasure, intense pleasure to the point of orgasm, and induce long forgotten memories, snatches of speech, or sensations of smell, taste and sound.

With electrodes in their brains, insects have been known to continuously press a lever that stimulates their "pleasure centre" until they die of exhaustion and lack of food. In New Orleans there are people who can stimulate their own brains simply by pressing a button and then monitor the brain activity of individuals for unusual, clever or dangerous patterns. This technique could also be used to control people - to make workers attentive and hard-working on the factory floor, soldiers eager and fearless in battle, to pacify demonstrators, and so on. Big Brother would then have no need for external controlling - a mysterious field of Big Brother would be inside every person's head!



● **ARMED SILENT MICHAEL GREENWOOD** has claimed that he worked on a secret CIA-US Navy project to train dolphins to enter Cuban harbours and attack American monitoring devices as the basis of a nuclear strike directed by frogmen. The dolphins were trained to kill them. The project failed because the dolphins were too unreliable.

● **BEDROOM BOARD TELLS TEACHER WHERE TO GET OFF, SILENCE IMPRIDES CLASS PERFORMANCE** An American University has fitted classrooms with a device for students to tell teacher when he is becoming boring. Each student can indicate when he can no longer stand without teacher's voice. The switches activate lights built on a "bedroom board" at the back of the class. Teacher quickly learns to adopt a more entertaining line.

At a Chicago school an experiment with children in the classroom has produced dramatic improvements in kids' academic performance. Not a word is spoken as class, Teacher and kids communicate entirely by memos "posted" in pigeon-holes on the classroom wall. Preliminary analysis revealed that the "silent" class made only a third as many mistakes as kids in normal classes. And the teachers loved it. Now you know why "silence is golden."

● **WILL QUAKE DEVASTATE STOKE-ON-TRENT?** EARTH SWELLS IN CALIFORNIA SYMPTOM. Fresh earth tremors have rattled crockery and shaken houses in Stoke-on-Trent. Last year, more

played on large number of violent persons. Other doctors fear that widespread use of "pleasure centre" stimulation could produce a new class of "electronic addicts" or EЛАДЫ.

More than most scientific developments, ESB is open to misuse by the authorities. If household pets can be turned into electronic robots by means of an operation that it is not longer simpler than ever to can human brain. The population of electrodes in a whole population at an early age may never die, be as feasible as mass inoculation. The authorities could then monitor the brain activity of individuals for unusual, clever or dangerous patterns. This technique could also be used to control people - to make workers attentive and hard-working on the factory floor, soldiers eager and fearless in battle, to pacify demonstrators, and so on. Big Brother would then have no need for external controlling - a mysterious field of Big Brother would be inside every person's head!

● **PLUTO'S SURFACE IS FROZEN GAS, JUPITER HAS MASSIVE TALL ASTRONOMERS** have established that the surface of Pluto is made of frozen methane. Discovered only in 1930, Pluto is the most distant planet in the solar system (40 times further from the sun than earth), and appears in naked eye to be a tiny point of light. Its surface temperature is estimated at an impossible -240°C.

NASA's space-probe Pioneer 10 has discovered that Jupiter has a massive magnetic tail that stretches 400 million miles into space, reaching as far as Saturn. Jupiter's magnetic field, like Earth's, is caused by the flow of electric charges in its interior. The field is shaped into a tail similar to a comet's, by the constant blowing of the "solar wind", the stream of particles emitted by the sun.

● **EUROPEAN ROCKET TO USE RUSSIAN FUEL** The "Ariane" rocket being developed by the European Space Agency for satellite launching will depend on Russian supplies of the fuel hydrazine. The reason is that the US has indefinitely closed the European hydrazine factory that makes hydrazine because of pollution by a chemical suspected of causing cancer.

● **MASSIVE BIOLOGICAL MUTATIONS UNKNOWN MATERIAL INDUCED BY SIBERIAN EXPLOSION** On June 30, 1908, an unidentified object struck earth near the Tunguska River, central Siberia. Impact produced an explosion equivalent to a massive hydrogen bomb and was followed by a shock wave that burnt out a 1,500 square mile area of forest. For days after the event, luminous clouds of the kind sometimes seen after large volcanic eruptions appeared over Russia and Europe. The clouds were to bring a number of scientists to mid-air a newspaper in Paris or London in the middle of the night.

Since 1920 the impact area has been subject to biological mutations at a rate 12 times the norm. Strange flowers and bushes have sprouted up and wild animals have given birth to a host of strange vegetations. Struggling to survive in the inhospitable conditions of the Siberian steppes has turned into a mighty and flourishing coniferous forest.

Early beliefs that the object was an unusually large meteorite have been abandoned. Now meteorite particles have been found in the area, instead, scientists have discovered particles whose composition is not only unlike that of any known meteorite, but also unlike any seen on earth.

The Russians are this year sending a number of scientists to investigate the mystery. One suggestion is that the object was a comet. More

funny is the theory that it was an alien nuclear-powered spaceship that went out of control and crashed.

Meanwhile, one of the largest showers of meteors over recorded is reported from China. Over 100 meteors fell, including one weighing more than 2 tons. Chinese scientists are investigating.

● **PLANTS MAKE ELECTRONIC CONVERSATION, REACT TO KOJAK, BEETHOVEN** A device on sale for 20 dollars in the US is claimed to convert your plant's "feelings" into a series of electronic bursts. Attached on one side of the plant to the main stem and the other to the plant's leaves, when listen as it reads to music, television or having cigarette smoke blown at it. Don't be surprised. Get to know what gives your plant greatest pleasure.

● **"PLANT CONVERSATION" BECOME FASHIONABLE** after Clive Buckster, an ex-CIA interrogation expert who trained New York cops in the use of the lie-detector, attached a lie-detector to a rubber plant in February 1966. He claimed that the plant showed a reaction, on being asked if it liked the taste of burning it or killed shrimps by dropping them into boiling water nearby. It has since been claimed that talking to your plants, or playing them soothing music, will make them healthier and faster-growing. Genius scientists discount the whole idea.

● **WORLD POPULATION TOPS 4 BILLION; MAJOR STEPS TOWARD VOLUNTARY EUTHANASIA** At midnight on March 31, the population of the world - China's Museum of Science and Industry counted in the 4 billionth person on planet Earth. The clock ticks away at a rate of 2.2 persons per second, or 100,000 a day.

Within a month or two major steps are predicted in the direction of voluntary birth control, towards reducing world population. In India, three states announced legislation to make sterilization of men and women compulsory after three children. India's population is 800 million and is growing by 10 million per month. Other measures include raising the marriage age, cash payments for voluntary sterilization of couples with 2 children or less, and strong sex incentives.

In America, the New Jersey Supreme Court unconditionally ruled that a woman which has kept 22 year old Karen Ouellet alive for 12 months can be switched off at the request of her parents. Karen went into a comatose following the drug overdose. The decision opens the legal way for other patients with no hope of recovery to be allowed to die even though they can be kept alive by medical machinery.





**Dr Who is the world's longest running TV Sci-Fi series. Ever since 1964 it has been thrilling British viewers with its own unique worlds of the past and the future. Now its ratings have never been higher and it appears as if the time-travelling Doctor will go on forever! TV SCI-FI'S Dan Andrews travelled to the BBC's White City studio in London to talk to one of the Dr Who special effects men - Mat Irvine.**

There are many reasons why the Doctor and his time-traveling Tardis have captured viewers' imaginations. For a start the Dr Who stories have always been as thoughtful as they have been exciting, dealing intelligently with the human condition, and never getting up. Although there have now been four actors playing Dr. Who over the years - as the Doctor is an immortal Time Lord, his human appearance undergoes physical changes every so often - each actor has added a new piece to his personality, so that now the Doctor is as complex and real to Dr Who fans as the

person next door.

But probably the greatest factor is the new success of the remarkable array of aliens and environments which cross the screen each year, together with the spectacular special effects that appear on screen. Mat Irvine has been working as a BBC special effects man for the past five years and has contributed to four Dr Who stories, including the currently popular *Pyramids of Mars* and *Castrovalva*.

Although the BBC employs about 45 visual effects staff, Mat says that as there are so many programmes to be produced that time and space place restrictions on the crew - together with the usual tight television budget. So each, *De Who* story has to have the best effects using models of *Space 1999*. However, for *Pyramids*, Dr Who had to beat Special visual effects for *De Who* can be divided into roughly three groups, says Mat - special props, the models and the miniatures. For *Pyramids*, the Doctor and his Tardis are a combination of miniatures from the Visual Effects, Camera and Make-Up departments. Because of the tendency for actors to be human shaped, most monsters end up basically humanoid in appearance. However, over the years the most popular monsters have been those which are not man-like at all. Not surprisingly, the Daleks still top the list, closely followed by the Giant Spiders of *Mirabius*.

TV SCI-FI readers will need no introduction to the Daleks (Issue No. 1), the most popular and best known of the alien denizens. The Spiders - fears the aliens *'Planet of the Spiders'* - were equally inglorious from an effects point of view. "Some were made as puppets," recalls Mat, "string from very fine nylon lines. Others were made purely 'alive' and the backsides would twitch." Special attention was paid to the Twink Spiders as the did most of the talking. Wires and cables enabled wrinkles and legs to move, and a specially made stand meant she could be moved from her platform to her throne with no effects man beneath to operate her.

But the star spider was not the Queen but 'Boris', a member of the control chamber of

spiders' 'Boris' claim to fame was that he was completely self contained, complete with motor and batteries, and he could be used in shows with stage, water and other extraction devices incorporated.

Harmless aliens are made by casting a clay mask of the features, then taking a plaster cast copy and moulding latex faces from it.

Special features can be built onto the set. In the case of *Doctor Who*, the Tardis operator in *TV Sci-Fi* (Issue 1), an electric circuit was built into the mask to control his 'eye'. Hands and feet are made in a similar fashion, and 'skin' is made flat and then wrapped around a frame.

Special props for any science fiction programme, despite their originality, are usually the same. The Doctor's sonic screwdriver has a range of permanent props which appear regularly in almost every single episode - phasers, communicators etc - only two items have gone out of production. The Doctor's sonic screwdriver and the Tardis key. Everything has to be built from scratch each episode. "The headaches come when one tries to design a different looking gun or radio from that which has gone before," says Mat.

Many of the Who props are incredibly complex, containing electronic components to make them operate. One example was the 'Macronaut', a device to 'vacate' transmission from the warps which were featured in the story *'The Pyramids of Mars'*. It was built with four motors, a special light source, and a tiny television screen. The process had to be designed to allow for 'regen'.

The control box needed for all that ended up looking just as complicated as the Macronaut itself.

Mat Irvine's speciality is model making. "The building of the models is really a speciality subject," he says, "but I like to say that the models are made out of practically anything and everything. A rocket will materials out of an old piece of plastic drainpipe and an alien craft from a block of balsa. Commercial kit parts are used, but not normally as a basis for the model, usually for detailing the final design. However, detailing need not be all that great; optimised scrapping

and plastic lampshades make very passable lunar buildings at a distance. Earth can be made from a simple mixture of sawdust, flour and water, and colouring scattered loosely onto a base layer of clay.

Creating the model sequences is very different from *TV Sci-Fi*'s action. To smooth out any bumps and jerks from the models, they are usually filmed at high speed (anything up to 120 frames per second) and then projected at normal speed (24 f/s for example). The models themselves are tiny. For instance, the Doctor's famous time-travelling Tardis stands just seven inches tall. Most of the model is painted with batteries and electronics to make the light or toy flash. First the model is built, then it is 'bowned' or very fine metal or nylon wires.

"Bloopers are another effect that are performed in miniature and filmed fast," explains Mat. "This spreads the 'bang' over a greater period of time and brings it more into line with its full size counterpart. An easy guide to the time for a model explosion can be obtained by first setting the model charges rapidly, one after the other, on a timer switch. This was the way the Pyramids and Martians were finally depicted in *'The Pyramids of Mars'*."

Although special effects are a major part of *Doctor Who*, they are limited up to two minutes for each scene. Mat says that they alone cannot make a science fiction programme. That is the reason why he prefers to watch *Star Trek* or *Space 1999*, even though the latter's effects are undoubtedly better. "I'm not a purist," he says. "The *Anderson* stuff is wonderful." He says, "but the trouble is you do rather tend to see the same sort of thing over and over. It's like some form of acid art ... you get a bit tired of it. You can't see a series just out of special effects."

Equally, he says, the second series of *Space 1999*, coming on the horizon, the show's scripts will match up to its special effects. And with Mat and the rest of the 45-man special effects team at White City perfecting their art every series, *De Who* should be more of a joy to watch every episode.

## Daleks, Giant Spiders, And A Time Travelling Police Box Called The Tardis... INSIDE DOCTOR WHO





# ALIEN OF THE MONTH



SCI-FI